TEXAS A&M UNIVERSITY at QATAR

ELECTRICAL AND COMPUTER ENGINEERING PROGRAM

THE ELECTRICAL & COMPUTER ENGINEERING PROGRAM PRESENTS

Model Predictive Control in Power Electronics and Drives

Professor José Rodriguez

Rector of Universidad Técnica Federico Santa María

Wednesday, November 18
12–1 p.m. Light lunch will be served
Lecture Hall 143, 1st floor

This seminar is dedicated to the application of Model Predictive Control (MPC) in the field of power electronics and drives. This is a completely new conceptual approach that may have significant impact in the development of power electronics and in the control of electrical energy for the coming decades. In principle, MPC allows to control a power converter without using Pulse Width Modulators (PWM) and linear controllers, what is a dramatic change in relation to the technology used today. This methodology is open to include modifications and extensions depending on specific applications.

José Rodriguez (M'81-SM'94) received PhD in electrical engineering from the University of Erlangen, Germany, in 1985. Since 1977, he has been with the Department of Electronics Engineering, University T'ecnica Federico Santa Maria, where he is currently a Professor. Since 2005, he has been the Rector of the same university.
He has directed more than 40 R& D projects in the field of industrial electronics. He has coauthored more than 250 journal and conference papers. His research group has been recognized as one of the two Centers of Excellence in engineering in Chile from 2005 to 2008
His main research interests include multilevel inverters, new converter topologies, control of power converters, and adjustable-speed drives

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